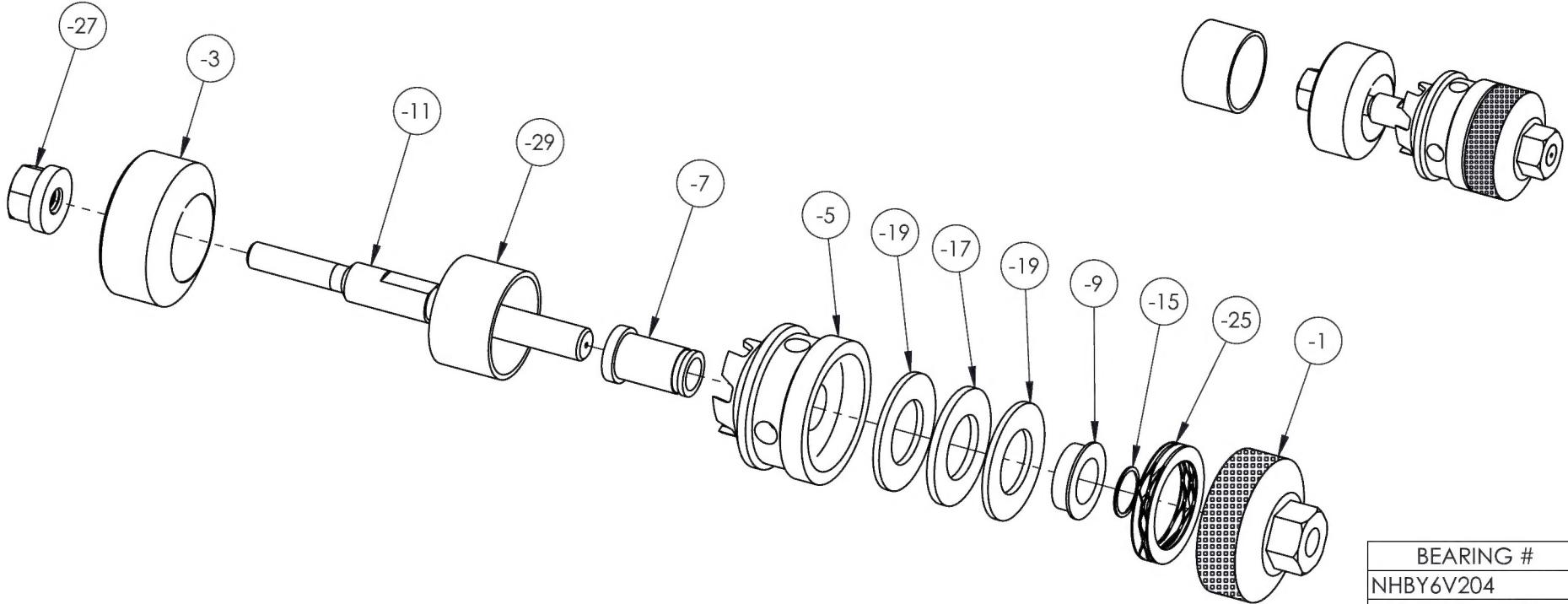


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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
2	17-0028	UPDATED TO NEW DRAFTING STANDARD. -1 -3 -5 -11 ADDED FINISH SPEC. QMSI-6.2.2, B.O. REV D. -1 CH'D DIM'S WAS $\varnothing 1.375$ IS $\varnothing 1.38$, WAS 5/16-24 UNF THRU ALL IS 5/16-24 UNF -2B THRU ALL. CH'D MATERIAL WAS 1018 IS 1018/1020 CR. -3 -11 CH'D MATERIAL WAS 4140 Q&T IS 4140/4142, ADDED HEAT TREAT RC 25-32. -3 CH'D DIM WAS $\varnothing 1.38$ IS $\varnothing 1.38$, -5 CH'D DIM WAS $\varnothing 1.375$ IS $\varnothing 1.38$, -7 , -9 CH'D MATERIAL WAS BRONZE IS BRONZE 660. -11 CH'D DIM'S WAS 5/16-24 IS 5/16-24 UNF -2A, WAS 1/4-20 IS 1/4-20 UNC -2A, -25 CH'D B/O P/N WAS APPLIED SMALLEY RING CO. #CS112-21 IS (APPLIED SMALLEY RING CO. #CS112-H2).	2/28/2017	RJC	JAG
3	17-0087	-1 CH'D DIM'S WAS .400 IS .40, WAS .535 IS .54, WAS .850 IS .85. -3 DELETED ENGRAVE P/N NOTE.	4/17/2017	RJC	JAG



BEARING #
NHY6V204
109-0133-11-101

ASSY QTY	ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS	PG.	DART AEROSPACE	
			-1	1	SPRING TENSIONER	1018/1020 CR		2		
			-3	1	SEAT	4140/4142		3		
			-5	1	CUTTER	0-1 DRILL ROD		4		
			-7	1	GUIDE	BRONZE 660		5		
			-9	1	BUSHING	BRONZE 660		6		
			-11	1	STUD	4140/4142		7		
B/O			-15	1	SPRIAL RETAINING RING	STEEL	$\varnothing 7/16$ SHAFT (MCMASTER-CARR #91665A350)	1		
B/O			-17	1	THRUST BEARING		$\varnothing 5/8$ ID X 1-1/8 OD X 5/64 (APPLIED #NTA-1018)	1		
B/O			-19	2	THRUST WASHER		$\varnothing 5/8$ ID X 1-1/8 OD X 1/16 (APPLIED #TRB-1018)	1		
B/O			-27	1	SWIVEL HEX FLANGE NUT	STEEL	1/4-20 UNC (MCMASTER-CARR #90477A029)	1		
B/O			-25	1	WAVE SPRING	STEEL	(APPLIED SMALLEY RING CO # CS112-H2)	1		
B/O			-29	1	TOOTH GUARD (FOR SHIPPING ONLY)	VINYL	$\varnothing 15/16$ ID X 5/8 LONG	1		
B/O			-23	1	SPANNER WRENCH		$\varnothing 1-1/2$ (MCMASTER-CARR #5475A13)	N/S	SCALE 1:1.5	DATE 9/26/2013

TITLE
PORTABLE BEARING CUTTERS

RBW1006-P

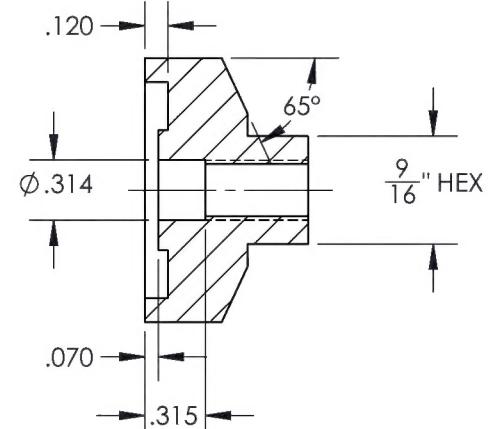
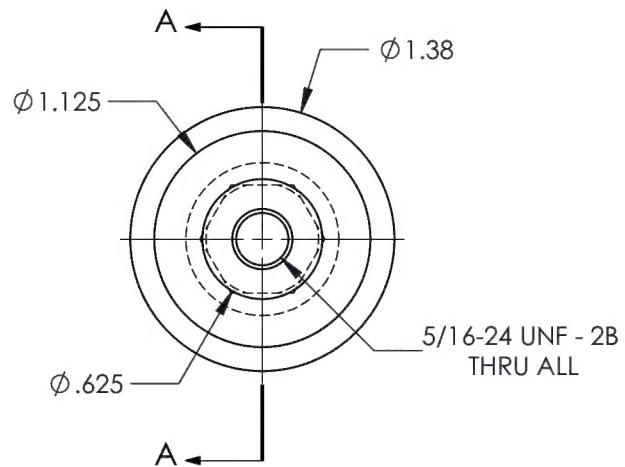
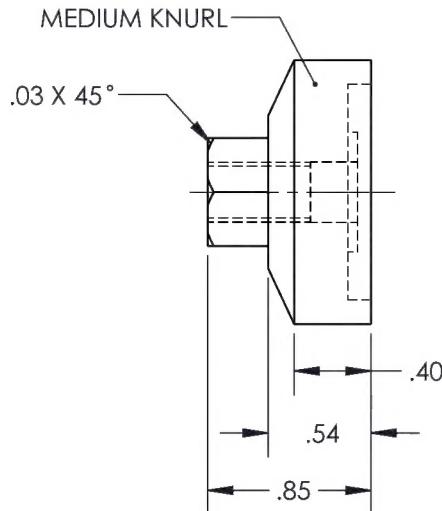
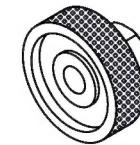
REV 3

MAT'L UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
HEAT TREAT .XXX \pm .005 FRACTIONS \pm 1/8
FINISH .XX \pm .01 ANGLES \pm 5°
SPEC .X \pm .1 SURFACES = 125
DRAWN BY: GILBERT
CHECKED: DUERFELDT
OPPS APPR: ANDERSON
QA APPR: LINDSAY
APPROVED: GILBERT
USED ON MODEL
1. BREAK ALL SHARP EDGES
.015 x 45° OR .015R
2. DIMENSIONAL LIMITS APPLY
AFTER PLATING
3. INTERPRET DIM AND TOL PER
ASME Y14.5M-2009

SCALE 1:1.5 DATE 9/26/2013 SHEET 1 OF 7

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
2	17-0028	-1 CH'D DIM'S WAS $\{\phi 1.375\}$ IS $\phi 1.38$, WAS 5/16-24 UNF THRU ALL IS 5/16-24 UNF -2B THRU ALL. CH'D MATERIAL WAS 1018 IS 1018/1020 CR, ADDED FINISH SPEC. QMSI-6.2.2, B.O. REV D.	2/28/2017	RJC	JAG
3	17-0087	-1 CH'D DIM'S WAS .400 IS .40, WAS .535 IS .54, WAS .850 IS .85.	4/17/2017	RJC	JAG



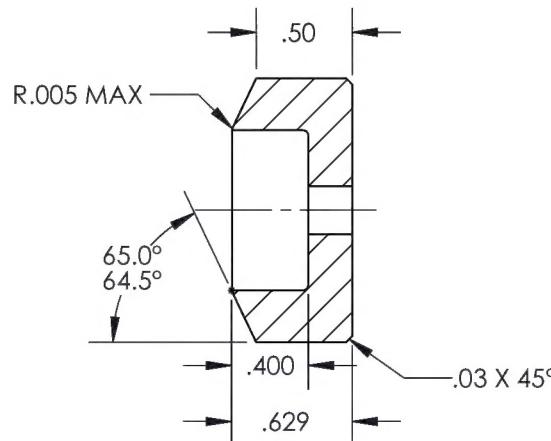
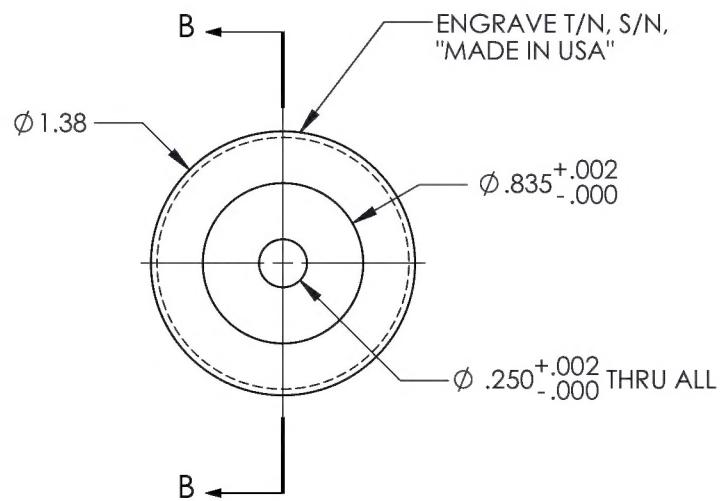
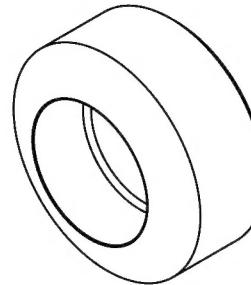
SECTION A-A

(-1)
SPRING TENSIONER

DART AEROSPACE	
TITLE	
PORTABLE BEARING CUTTER	
DWG NO. RBW1006-P-1	
REV 3	
MATERIAL 1018/1020 CR	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
HEAT	.XXX \pm .005 FRACTIONS \pm 1/8
TREAT	.XX \pm .01 ANGLES \pm 5°
FINISH	X \pm .1 SURFACES = 125
SPEC	QMSI-6.2.2, B.O. REV D
DRAWN BY:	GILBERT
CHECKED:	DUERFELDT
OPPS APPR:	ANDERSON
QA APPR:	LINDSAY
APPROVED:	GILBERT
USED ON MODEL	
SCALE 1:1	DATE 9/26/2013
SHEET 2 OF 7	

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
2	17-0028	-3 CH'D DIM WAS (Ø1.38) IS Ø1.38. CH'D MATERIAL WAS 4140 Q&T IS 4140/4142. ADDED HEAT TREAT RC 25-32. ADDED FINISH SPEC. QMSI-6.2.2, B.O. REV D.	2/28/2017	RJC	JAG
3	17-0087	-3 DELETED ENGRAVE P/N NOTE.	4/17/2017	RJC	JAG



SECTION B-B

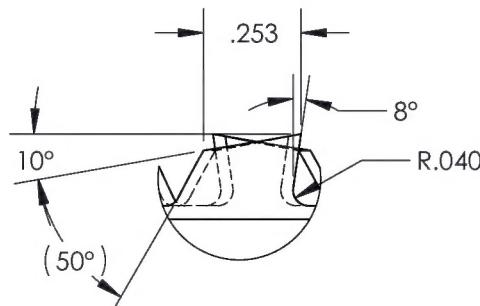
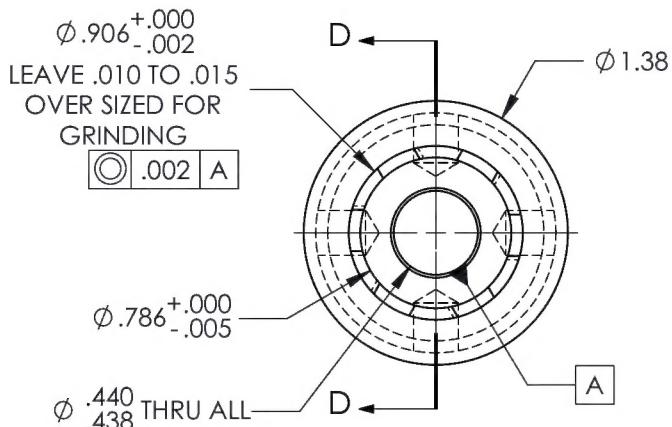
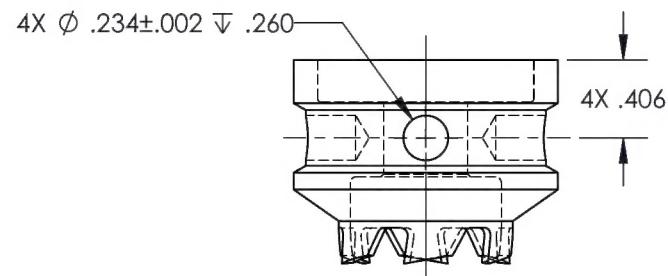
DART AEROSPACE	
TITLE	
PORTABLE BEARING CUTTER	
DWG NO.	
RBW1006-P-3	
REV 3	
MAT'L 4140/4142 UNLESS OTHERWISE SPECIFIED HEAT TREAT RC 25-32 DIMENSIONS ARE IN INCHES FINISH BLACK OXIDE .XXX ± .005 FRACTIONS ± 1/8 SPEC QMSI-6.2.2, B.O. REV D .XX ± .01 ANGLES ± 5° DRAWN BY: GILBERT X ± .1 SURFACES = 125 ✓ CHECKED: DUERFELDT OPPS APPR: ANDERSON QA APPR: LINDSAY APPROVED: GILBERT USED ON MODEL	
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R	
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	
SCALE	1:1
DATE	9/26/2013
SHEET 3 OF 7	

(-3)

SEAT

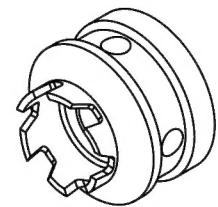
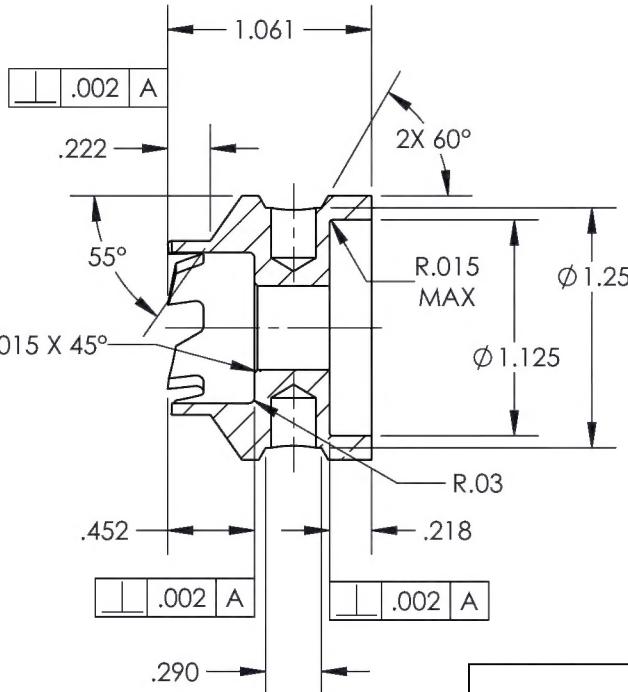
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REV			ECR			DESCRIPTION			DATE			INITIAL			APPROVED		
2	17-0028		-5 CH'D DIM WAS $(\varnothing 1.375)$ IS $\varnothing 1.38$. ADDED FINISH SPEC. QMSI-6.2.2, B.O. REV D.						2/28/2017			RJC			JAG		



DETAIL VIEW
SCALE 2 : 1
TYP TO 6 TEETH

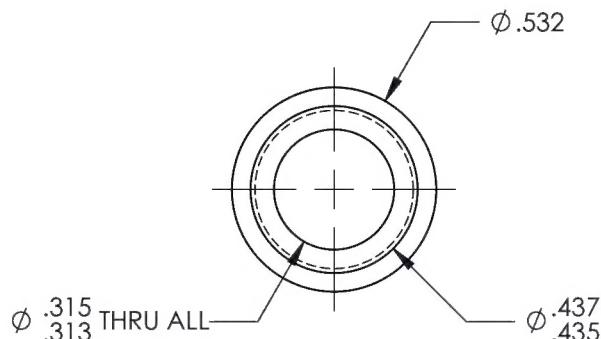
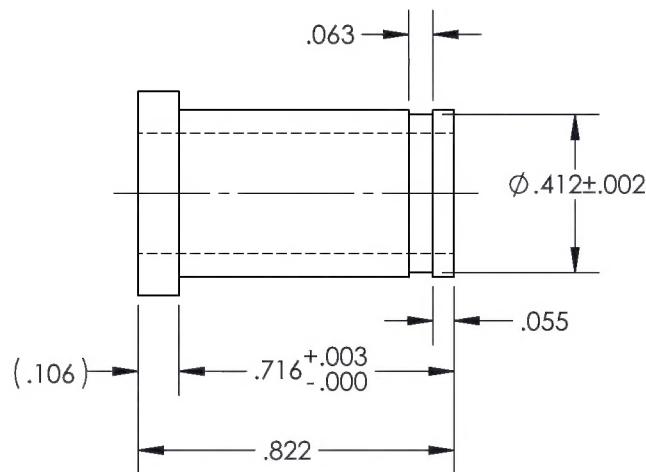
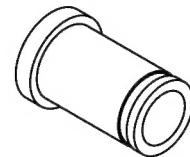
(5)
CUTTER



DART AEROSPACE	
TITLE	
PORTABLE BEARING CUTTER	
DWG NO.	REV 3
MAT'L 0-1 DRILL ROD	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT 55-60 HRC	.XXX ± .005 FRACTIONS ± 1/8
TREAT	.XX ± .01 ANGLES ± 5°
FINISH BLACK OXIDE	X ± .1 SURFACES = 125
SPEC QMSI-6.2.2, B.O. REV D	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
DRAWN BY: GILBERT	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
CHECKED: DUERFELDT	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
OPPS APPR: ANDERSON	USED ON MODEL
QA APPR: LINDSAY	
APPROVED: GILBERT	
SCALE 1:1	DATE 9/26/2013
SHEET 4 OF 7	

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
2	17-0028	-7 CH'D MATERIAL WAS BRONZE IS BRONZE 660.	2/28/2017	RJC	JAG

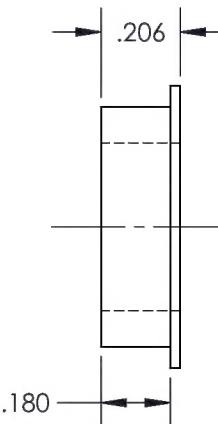
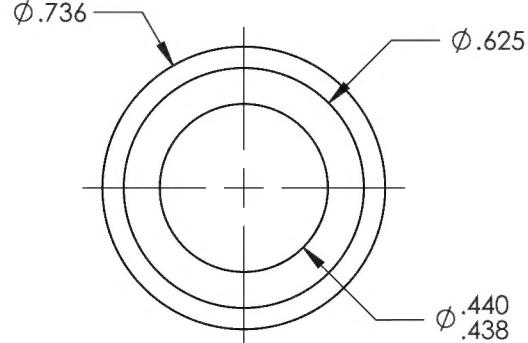
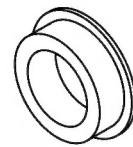


(-7)
GUIDE

DART AEROSPACE	
TITLE	
PORTABLE BEARING CUTTER	
DWG NO.	
RBW1006-P-7	
REV 3	
MATERIAL BRONZE 660	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
HEAT .XXX ± .005 FRACTIONS ± 1/8	
TREAT .XX ± .01 ANGLES ± 5°	
FINISH X ± .1 SURFACES = 125 ✓	
SPEC	
DRAWN BY: GILBERT	
CHECKED: DUERFELDT	
OPPS APPR: ANDERSON	
QA APPR: LINDSAY	
APPROVED: GILBERT	
SCALE	2:1
DATE	9/26/2013
SHEET 5 OF 7	

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
2	17-0028	-9 CH'D MATERIAL WAS BRONZE IS BRONZE 660.	2/28/2017	RJC	JAG

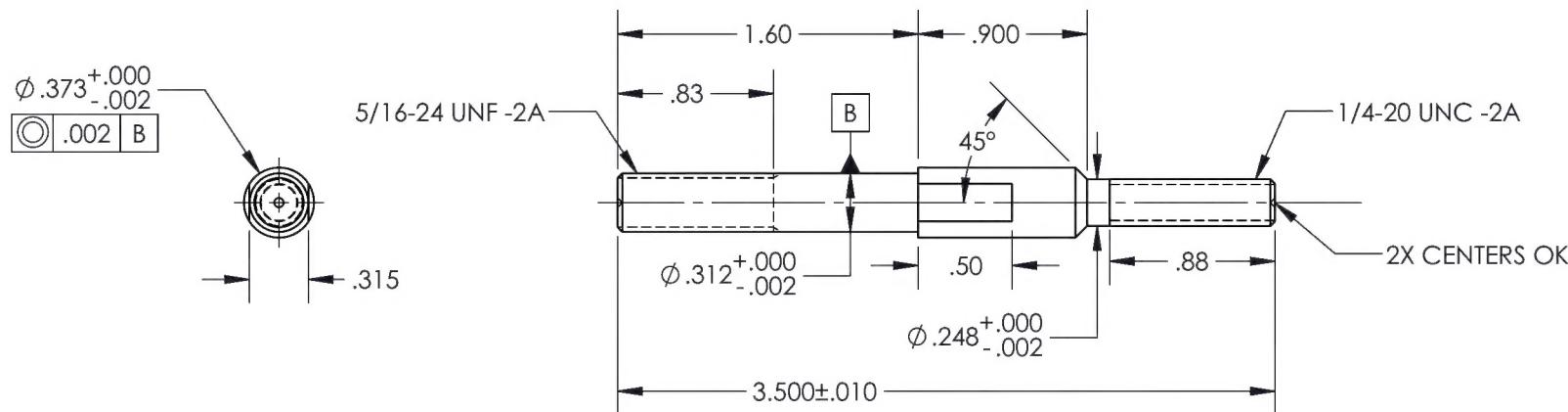
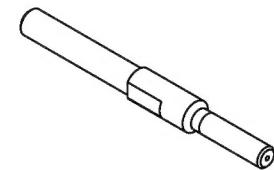


(-9)
BUSHING

DART AEROSPACE	
TITLE	
PORTABLE BEARING CUTTER	
DWG NO. RBW1006-P-9	
REV 3	
MATERIAL BRONZE 660	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
HEAT XXX ± .005 FRACTIONS ± 1/8	
TREAT .XX ± .01 ANGLES ± 5°	
FINISH X ± .1 SURFACES = 125 ✓	
SPEC	
DRAWN BY: GILBERT	
CHECKED: DUERFELDT	
OPPS APPR: ANDERSON	
QA APPR: LINDSAY	
APPROVED: GILBERT	
SCALE 2:1	DATE 9/26/2013
SHEET 6 OF 7	

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
2	17-0028	-11 CH'D DIM'S WAS 5/16-24 IS 5/16-24 UNF -2A, WAS 1/4-20 IS 1/4-20 UNC -2A. CH'D MATERIAL WAS 4140 Q&T IS 4140/4142, ADDED HEAT TREAT RC 25-32. ADDED FINISH SPEC. QMSI-6.2.2, B.O. REV D.	2/28/2017	RJC	JAG



DART AEROSPACE	
TITLE	
PORTABLE BEARING CUTTER	
DWG NO.	
RBW1006-P-11	
REV 3	
MATERIAL 4140/4142	
HEAT TREAT RC 25-32	
FINISH BLACK OXIDE	
SPEC QMSI-6.2.2, B.O. REV D	
DRAWN BY:	GILBERT
CHECKED:	DUERFELDT
OPPS APPR:	ANDERSON
QA APPR:	LINDSAY
APPROVED:	GILBERT
UNLESS OTHERWISE SPECIFIED	
DIMENSIONS ARE IN INCHES	
.XXX ± .005 FRACTIONS ± 1/8	
.XX ± .01 ANGLES ± 5°	
.X ± .1 SURFACES = 125 ✓	
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R	
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	
USED ON MODEL	
SCALE	1:1
DATE	9/26/2013
SHEET 7 OF 7	

(-11)

STUD